JMYT-233US

Appln. No.: 09/763,981

Amendment Dated May 10, 2004

Reply to Office Action of November 10, 2003

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

## **Listing of Claims:**

- 1. (Currently Amended) A sensor for detecting food spoilage products within food packaging or the opening or compromise of packaging, comprising a <u>film of a sensor composition on an internal surface of the packaging or a label retained inside packaging, which composition consisting of a metal co-ordinated complex and a resinous material, metal co-ordinated complex immobilised in or on a substrate, which complex, upon food spoilage or the opening or the compromise of packaging, undergoes a ligand exchange reaction to release a detectable component by the preferential binding of a gaseous substance to the <u>metal(s) atoms metal of the said complex, wherein the metal is selected from the group consisting of palladium, platinum, ruthenium and iron.</u></u>
- 2. (Previously Presented) A sensor according to claim 1, wherein the gaseous substance is selected from the group consisting of at least one of a sulfur-containing compound, a nitrogen-containing compound, an alcohol-containing compound, a carbonyl-containing compound, and a phosphorus-containing compound.
- 3. (Previously Presented) A sensor according to claim 1, wherein the metal is complexed with a chromophore or fluorophore.
- 4. (Cancelled)
- 5. (Cancelled)
- 6. (Previously presented) A sensor according to claim 1, wherein the metal complex is a palladium-fluorophore complex.
- 7. (Previously Presented) A sensor according to claim 6, wherein the complex is palladium-Fluorexon.
- 8. (Cancelled)
- 9. (Currently Amended) A method of detecting <u>food spoilage products within food</u>

  <u>packaging</u>, or the opening or compromise of a package, comprising <u>the steps of applying</u>

  to an internal surface of the package a film of a sensor composition or inserting a label

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coated with a film of a sensor composition to be retained within the packaging, which sensor composition consisting of inserting into or applying to said package or incorporating into a portion of the interior surface of said package, a metal co-ordinated complex and a resinous material, which complex, upon food spoilage or the opening or the compromise of packaging, undergoes a ligand exchange reaction to release a detectable component by the preferential binding of a gaseous substance to the metal(s) atoms of the said-complex, wherein the metal is selected from the group consisting of palladium, platinum, ruthenium and iron.

- 10. (Original) A method according to claim 9, wherein food spoilage is detected by the release of a fluorophore or a chromophore from a metal complex.
- 11. (New) A sensor according to claim 3, wherein the chromophore or fluorophore is selected from the group consisting of fluorescein isothiocyanate, fluorescein, fluoresceinamine, calcein blue, "Fura 2", quinzarin, alizarin complexone, alizarin red, alizarin , isoce in, "Quin 2" and 4,4-dihydroxy-azobenzene 3,3-dicarboxylic acid, disodium salt.
- 12. (New) A sensor according to claim 1, wherein the resinous material is polyvinyl alcohol (PVA).